

Horticultural.

GRAND RIVER VALLEY HORTICULTURE.

Mr. Worthington, of Kansas, had noticed the curled leaf of the peach was very bad this year. All varieties of strawberries in Kansas are much softer than here.

The subject of mulberries was then brought up, from which we arrive at this conclusion: "Don't buy any expecting to get good fruit, except it be of grafted varieties."

The Merits of Wood Ashes.

In an essay read before the American Horticultural Society at the Cleveland, Ohio, meeting a few years ago, Mr. J. M. Smith gave an account of the means employed for the prevention of evil effects of a prolonged drought. Among these means a free use of wood ashes was named as one of the simplest and most effective.

Recently Mr. Smith has made a comparative test of the effects of wood ashes and barn yard manure on a scale large enough to show results that are more than "indications." Two acres lying side by side were treated exactly alike in every respect except that one was manured with unleached wood ashes, and one with stable manure.

Mr. Smith reports the results of the trial to the *Prairie Farmer* as follows:

The acre fertilized with ashes yielded 51 bushels the most, and if there was any difference in quality it was in favor of those that had the ashes. Now, the fair inference would be that the ashes were much the best manure for potatoes. Let us look a little further: The last half of May and the first half of June were wet and cold, and so far the two acres seemed to keep about even. After June 15th the weather became very dry, and there was little rain upon the plants until they were ripe. Very soon after the ground began to get dry it could be plainly seen that those manured from the compost heap were suffering from want of rain, while those manured with ashes were growing very rapidly. This continued until they were ripe.

The simple fact is, potatoes or strawberries manured with ashes stand drouth that could be ruinous to crops fertilized with any manure I have ever tried.

To this fact I attribute the failure of the com post heap to hold its own with the upon which ashes were used.

I have tried the experiment many times, always with precisely the same result, provided we had a dry season during the growth of the crop. I do not know but the rule will hold good with all farm and garden crops, but with the above named there is no doubt. I do not undertake ashes as manure. I have used them in preference to any fertilizer I could get for potatoes, many years.—*Popular Gardening*.

A "Trick of the Trade."

One of the sharp tricks by which St. Louis fruit commission dealers manage to unfairly claim their own pockets at the expense of the grower, and yet present a fair business-transaction appearance on the above-board face of it, is thus outlined by the *Fruit-Grocers' Journal*:

"One house receives a whole car-load and sells it out at good rates as possible to other houses, acting in that case as a jobber. Before the whole car-load is sold he has ordered by telegraph another car-load from Chicago, where the market is very low at the time. He orders them on commission. He is informed by telegraph as soon as his car has started, and perhaps before it has started from the point at which it was loaded in the country. He has time, if he deems it necessary, to sell a fair portion of the car-load and order his car from Chicago before the one coming to him from the country, and have it arrive the day after. Now he has got the bulge on the market, and as his Chicago goods cost him less than he has sold at, he can undersell those that he sold and still get ten per cent from the grower. Neither is that all. When he makes his returns to his country grower he can make them the basis of the sales made on a market he has himself broken down and get ten per cent. Besides that, he makes as clear profit the difference at which he sold his car and the market price, after he has broken it."

American Trade in Bananas.

The *American Cultivator* says: The banana trade this summer is enormous.

Business is increasing year by year, but nothing like the present flood of receipts has ever been seen in this country before this season. This month is the height of the season on bananas, and the large quantities of this fruit received at the leading distributing points since the trade began in April seem amazingly large. Six cargoes of bananas a week are landing at Boston, now a total of about 70,000 to 80,000 bunches. Since April 1, Seavers & Co., W. W. & C. R. Noyes and the Boston Fruit Company, the three principal importers at this port, have received between them forty-six vessel loads, which average 10,000 bunches to a cargo, making about 400,000 bunches that have arrived here since the close of March. Besides this, think of New York, Baltimore, New Orleans, Philadelphia, and all the rest of the big distributing points for the bananas, and it seems incredible that such an industry should spring up in so brief a time. New York alone handles from 125,000 to 150,000 bunches per week.

The berry thought to produce the most fruit to the acre was the Magpie. The Wilson was still a favorite with the ladies for canning. Mr. Bailey thought the Wardell will soon lead the Wilson for canning, but he did not wish to say for certain that any one variety will supersede all others. Strawberry crates were considered and the single tier boxes preferred. No matter how much caution is administered to employees a serious lack of care seemed to compel growers to permanently adopt the single tier, 12 box flat crate, box five inches square and two and a half inches deep. The fruit not only keeps better and carries better, but it shows off to much more advantage. E. J. Herrick, the Monroe Street grocer, rejects the double tier system of marketing berries.

The next meeting is to be held the fourth Tuesday in July at the residence of S. S. Bailey.

HORTICULTURE IN LENAWEE COUNTY.

The Jure meeting of the Lenawee County Horticultural Society was held at the residence of J. W. Helme, at Adrian, on the 25th. A show of small fruits was made by the members, small premiums being awarded. Some nice fruit was shown, a single plate of Cumberland strawberry being remarkably fine. It was shown by Saiter Bros., and took special premium. D. G. Edmiston received first premium on collection, fourteen varieties; Nathan B. Leeds, second on collection; E. W. Allis, first on single plate; T. J. Gibbs, first on single plate, two varieties.

Mrs. M. H. Deane read a paper "Pin Money," discussing the various ways in which a woman may earn her own spending money. The discussion drifted upon poultry topics, in which the ladies all seemed much interested. Mrs. Allis next read a paper on "Flowers," speaking of their beauty and the countless ways in which they are reproduced in art and decoration.

The subject of "Spraying" was then brought up, and handled in a business-like way.

B. W. Stoen would make the solution weaker, and apply more vigorously.

J. W. Helme, Jr., would do the same way.

He also stated that trees that were not sprayed looked as if the foliage had been burned by too strong a solution of the poison.

D. G. Edmiston attributed the bad appearance of the foliage to a sort of mildew. He was certain that in his case it was not the result of spraying. He also stated that if rain followed soon after spraying, the leaves would be more likely to be damaged, and apple and pear trees would stand more than plumb.

E. W. Allis had noticed that all kinds of fruit trees are more affected by their ordinary diseases this year than common.

Mr. Siger had noticed the same thing.

Well, sir, not as many as you suppose. Perhaps one in twenty-five. It is so easy, but looks are deceptive. Why, I have seen a dozen persons count the same bunch of bananas right here in this store, and no two of them came out alike. But I will tell you how to count bananas correctly as they hang in a bunch, use strategy. We take a paper of pins and count just how many are in it. They are arranged in rows, and we can count them, and we know we are right. Then we go through the bunch of bananas and stick a pin in each one, going over them several times to make sure that each one has its pin. Then, by counting how many pins are left, and performing a little problem in subtraction, we learn what we are working after.

Lettuce Mildew.

When grown at a temperature about 40° F. at night, 55° in cloudy, and 70° in sunny days, lettuce under glass is often rendered unprofitable by the attack of this disease, which causes the lower leaves to decay, and often the whole plant to die quickly. Other conditions may be a measure aid in controlling the disease; for instance, anything that may cause a weak leaf-action of the plant, too much water in the soil, and too much moisture in the house, especially during the night.

Evaporated sulphur proved beneficial, but not wholly preventive, in fact, only preventive conditions were found satisfactory. These conditions are:

1. A lower temperature at night during the day, i. e., ranging from 35° F. at night to 50° F. to 70° F. during the day. In sunny weather the temperature may run 10° higher than on cloudy days.

2. Perfect drainage of the soil.

3. A house naturally dry, light and airy.

4. An abundance of plant-food in a light porous soil.

Should the plants not start into a vigorous growth soon after transplanting, the application of fine ground bone, one-half pound to a square yard, and two ounces of nitrate of soda to the same space, will give remarkable results.

Suggestion.—While it is possible by close and constant attention to provide conditions for the successful growth of both the rose and lettuce under glass, such care and attention adds very materially to the cost of the products, and some means should be devised to destroy the germs of these diseases. This may possibly be found in fungicides used in the houses, before the plants are started or by their application to the soil and growing crops while in a young state.

Rose Mildew.

Long experience in growing the rose has led many to believe that the rose mildew is brought on by various conditions that weaken the vigor of the leaf, such as want of an abundance of plant food in a proper condition of the soil, often resulting from improper drainage, irregular or overwatering, or too sudden changes of temperature, especially after the plants have been forced at a high temperature. The successful rose grower therefore, is one who, by constant care and good judgment, always provides against any or all of the above causes.

A sure and safe remedy, with proper precautions, was found in evaporated sulphur. In the use of this remedy a small kerosene stove with a thin iron kettle was used, and the sulphur kept boiling two or three hours three each week when the house was closed.

Precaution.—The only precaution needed is that the apparatus be placed so that there shall be no danger of it getting upset, and that only heat enough be applied to boil the sulphur, for, if by any accident the sulphur should catch on fire, it would destroy all the plants in the house very quickly.

Suggestion.—It has been suggested that if the pipes are painted with linseed-oil and sulphur two or three times each year, similar good results would follow. It has long been the practice to paint greenhouse pipes with a mixture of lime and sulphur, but the results have not always been satisfactory, and the above suggestion may be open to the same objection, although we know of no carefully recorded experiments in the use of linseed-oil and sulphur paint.

The Cuculio in West Michigan.

At the June meeting of the Saugatuck and Ganges Horticultural Society, the question of the destruction of the plant cuculio was under consideration. This Mr. W. D. Wiley said, is our worst enemy to stone fruits and often injures apples and pears. Various methods are recommended, but all of them with varying success, or entire failure.

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KNOW THYSELF.

THE SCIENCE OF LIFE.

A well-known horticulturist, speaking of keeping the spraying mixture properly stirred to prevent settling says: "Constant agitation is very important in using Paris green, far more so than with the lighter powder of London purple. From an experiment that I have just made I find that a mixture of one pound of Paris green uniformly distributed by stirring in two hundred gallons of water and then permitted to rest, would in thirty seconds give a mixture drawn from the bottom through the pipe of the strength of about one pound to six gallons of water. London purple should first be mixed with a little water into a paste-like consistency, and then washed through a fine sieve into the tank that such impurities may be removed as might otherwise cling to the spraying nozzles."

From experiments made in the horticultural department of the N. Y. Agricultural Experiment Station at Geneva, the following conclusions were drawn. That kerosene may be used on many of our trees when they are in a dormant state, without injury. That it will prove successful in destroying the eggs of the aphids and other insect pests, wherever it is possible to reach them with the spray. That it may be used at a nominal cost. While it would answer well for old trees with hard bark, it would doubtless be unsafe for young peach trees and other trees with tender bark. Spraying with the leaves on's macro to injure the trees, requires more of the liquid, and is more liable to fail in reaching the spines on the under side or in the interior of the curled leaves. The experiments made for the scab on the pear and apple, failed of any successful result, the poisons employed doing quite as much harm to the trees as to the fungus.

"It is a fact," that Hood's Sarsaparilla does cure scrofula, salt rheum, and other diseases or affections arising from impure water or low condition of the blood, overcomes that disease, creates a good appetite, and gives strength to every part of the system. Try it.

the tree was frequently injured by jarring the trees. The jarring process requires a cushioned mallet or a spike driven into the tree to receive the blow of the hammer, or a limb may be sawed off for a surface to receive the concussion. Spraying with arsenites to kill the cuculio has not yet been so successful as to inspire our fruit-growers with confidence to use them.

Care. Hold thought about one-half of the blossoms were drying up and falling off without setting fruit, and others concurred in the opinion.

Horticultural Items.

ASIDE from the whortleberry, there is no wild fruit that is not crowded out of the market, not only by the super-excellence of the cultivated berry, but by its greater cheapness.

J. J. PAYNE, of Warsaw, Ky., gathered 200 bushels of Sharpless and Crescent strawberries from an acre of ground, which were sold at an average of \$3 per bushel. They were fine berries, put up in the most attractive manner, and sold readily at high rates.

In San Bernardino Valley, in Southern California, is a great grape-growing district.

The vineyards this year are affected by a mysterious disease which has so far baffled investigation. The vines appear right one day; next morning they have turned a sickly color, and soon shrivel and die. The disease is spreading, and occasions growers a great deal of anxiety.

In Fremont.

Ripening Extracted Honey.

R. McKnight, in the *American Bee Journal*, in a prize essay on the subject of extracted honey, has this to say about the process of ripening it:

The ripeness of honey consists mainly in its holding in suspension an undue proportion of water. The removal or expulsion of this excess of water, constitutes the process of ripening. The simplest and easiest way to effect this, is to heat the honey in a water-bath until the excess of water be driven off in the form of vapor. This treatment is believed by some to improve its aroma, and injure its flavor. My own experience has taught me that there is more importance attached to this notion than it deserves.

It is by means of evaporation—in virtue

of which vapor passes imperceptibly from the surface of a liquid when exposed to the air—that the process of curing is generally carried on. The rate at which evaporation takes place depends upon the temperature.

In a low temperature, the air soon reaches the point of saturation, beyond which it is incapable of taking up moisture or holding it in suspension; hence the higher the temperature, and the greater the surface exposed, the more rapid will the evaporation of water from honey be.

Many beekeepers have devised shallow troughs over which they slowly run their honey to facilitate the work of curing. Whatever the means employed, it should be borne in mind that a high temperature is necessary to rapid ripening.

There is still another method of curing honey, that I have myself practiced with success.

This may be denominated the "gravitation" method. It consists in storing honey in deep tanks (mine hold from five to seven hundred pounds each, and are about equal in diameter to that of a large-size extractor-can). If these are placed in a warm room (either still, a glass house), and filled with unripe honey, then covered and left to stand for two or three weeks, it will be found that the water incorporated with the honey will have risen to the surface—the honey and the water forming two strata as distinct and well defined as that of oil and water in the same vessel.

The honey may then be drawn off through the faucet below, and the water left remaining in the tank, when it will be found to be no sweeter and no denser than the liquid usually employed in making honey-vinegar, and this is the use to which I put it. It may be dipped out or poured off the top of the honey.

On several occasions I have found a body of water on top of the honey as much as three inches deep, and on passing one's finger down through it, the surface of the honey will be palpable and well defined.

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These Machines Guaranteed for Five Years.

Purchaser pays freight, which runs from 65c. to 90c. on each machine, according to location of purchaser.

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Bear in mind that these machines are thoroughly made and of first-class workmanship.

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DETROIT, SATURDAY, JULY 5, 1890.

This Paper is Entered at the Detroit Post-office as second class matter.

SPECIAL NOTICE.

To-morrow, July 4th, being a legal holiday, we go to press one day earlier than usual. All business houses will be closed, and the boards of trade have adjourned over until Monday. Our market reports are therefore as late as if we had issued on Saturday morning as usual.

WHEAT.

The receipts of wheat in this market the past week amounted to 58,465 bu., against 62,018 bu. the previous week, and 43,070 bu. for corresponding week in 1889. Shipments for the week were 54,938 bu., against 63,138 bu. the previous week, and 41,909 bu. the corresponding week last year. The stocks of wheat now held in this city amounted to 161,638 bu., against 165,398 bu. last week, and 45,646 bu. at the corresponding date in 1889. The visible supply of this grain on June 28 was 20,174,855 bu., against 21,088,719 bu. the previous week, and 15,300,715 bu. for the corresponding week in 1889. This shows a decrease from the amount reported the previous week of 913,634 bushels. As compared with a year ago the visible supply shows an increase of 4,874,170 bu.

The market has been doing better the past week, and closed yesterday at an advance of 1 1/4@1 1/2c on spot as compared with Friday last. The markets of Chicago, New York and St. Louis show a corresponding advance, while on futures the gain has been fully as much. The considerations which have caused this advance are various, but the unfavorable weather conditions in Great Britain and parts of Europe, and the prevalence of rust in some of the winter wheat States were largely responsible. Favorable weather might cause a set-back, but it is doubtful if, with present crop prospects, prices are not yet below a legitimate level.

The following table exhibits the daily closing sales of spot wheat in this market from June 10th to July 3rd inclusive:

	No. 1 White.	No. 2 Red.	No. 3 Red.
June 10.	65	65	65
11.	69 1/2	69 1/2	69 1/2
12.	68 1/2	68 1/2	68 1/2
13.	68 1/2	68 1/2	68 1/2
14.	68 1/2	68 1/2	68 1/2
15.	68 1/2	68 1/2	68 1/2
16.	68 1/2	68 1/2	68 1/2
17.	68 1/2	68 1/2	68 1/2
18.	68 1/2	68 1/2	68 1/2
19.	68 1/2	68 1/2	68 1/2
20.	68 1/2	68 1/2	68 1/2
21.	68 1/2	68 1/2	68 1/2
22.	68 1/2	68 1/2	68 1/2
23.	68 1/2	68 1/2	68 1/2
24.	68 1/2	68 1/2	68 1/2
25.	68 1/2	68 1/2	68 1/2
26.	68 1/2	68 1/2	68 1/2
27.	68 1/2	68 1/2	68 1/2
28.	68 1/2	68 1/2	68 1/2
29.	68 1/2	68 1/2	68 1/2
30.	68 1/2	68 1/2	68 1/2
31.	68 1/2	68 1/2	68 1/2
July 1.	68 1/2	68 1/2	68 1/2
2.	68 1/2	68 1/2	68 1/2
3.	68 1/2	68 1/2	68 1/2
4.	68 1/2	68 1/2	68 1/2

No. 2 white sold at 81 1/2c, No. 3 white at 85c, and rejected at 65@75c. Rejected red closed at 65@73c.

The following is a record of the closing prices on the various dates in futures each day during the past week:

	July	Aug.	Sep.
Saturday.	87 1/2	87 1/2	87 1/2
Sunday.	87 1/2	87 1/2	87 1/2
Tuesday.	88	89 1/2	89 1/2
Wednesday.	89 1/2	89 1/2	89 1/2
Thursday.	89 1/2	89 1/2	89 1/2
Friday.	89 1/2	89 1/2	89 1/2

The rains are interfering with haying, and if they continue, with the extremely hot weather of the past week, there will be plenty of rust in wheat.

The green aphid has appeared in the wheat fields of several of the southwestern counties of the State.

It is quite apparent that the more active buying by shippers is the result of less favorable crop conditions in Europe.

The Winnipeg Commodity says the June just closed was the most favorable growing month for the crop in the history of Manitoba.

The California outlook for wheat is reported to have greatly improved during the month.

Wet weather in England is reported to be general, and some cable reports state that the outlook for a crop is really poor. The fields are said to be flooded to an extent which stops growth of the cereals, while quantities of hay are rotting on the ground and are spoiled beyond recovery.

Manitobans are said to be worrying over the question of how they are going to get their big wheat crop to market. They should first make sure of the "big crop."

The following table shows the quantity of wheat "in sight" at the dates named, in the United States, Canada, and on passage to Great Britain and the Continent of Europe:

	July 1, 1890.	Total previous week.	Total June 15, 1889.
Wheat supply.	31,268,141	52,767,187	53,571,981
On passage for United Kingdom.	12,000,000	12,000,000	12,000,000
On passage for Continent of Europe.	5,000,000	5,000,000	5,000,000

The estimated receipts of foreign and home-grown wheat in the English markets during the week ending June 21 were 556,190 bu. more than the estimated consumption; and for the eight weeks ending June 7 the receipts are estimated to

have been 2,403,144 bu. more than the consumption. The receipts show an increase for those eight weeks of 1,458,952 bu. as compared with the corresponding eight weeks in 1889.

Shipments of wheat from India for the week ending June 21, 1890, as per special cable to the New York Produce Exchange, aggregated 530,000 bu., of which 320,000 bu. were for the United Kingdom and 200,000 bu. for the Continent. The shipments for the previous week, as cabled, amounted to 530,000 bu., of which 440,000 bu. went to the United Kingdom, and 80,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregate 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,040,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregate 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,040,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregate 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,040,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregate 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,040,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregate 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,040,000 bu. to the

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Poetry.

THE HOMESTEAD.

Against the wooded hills it stands,
Ghosts of a dead home staring through
Its broken lights on wasted lands
Where old-time harvests grew.

Unplowed, unown'd, by seyne unshorn,
The poor, forsaken farm-fields lie,
Once rich and ripe with golden corn
And pale green breadths of rye.

Of healthful birth and flower hereft,
The garden plot no house-wife keeps;
Through weeds and tangle only left,
The snake, its tenant, creeps.

All spray, once blossom-clad,
Sways late before the empty rooms;
Beside the roofless porch, a sad,
Pathetic red rose blooms.

His tract, in mould and dust of drouth,
On floor and hearth the squirrel leaves,
And in the fireless chimney's mouth
His web the spider weaves.

The leaning barn, about to fall,
Resounds no more on hushing eves;
No cattle low in yard or stall,
No thrasher beats his sheaves.

So sad, so drear! It seems almost
Some haunting presence makes its sign;
That down you shadow lone some ghosts
Might drive his spectral kine!

Home so desolate and lone!
Did all thy memories die with thee?
Were any wed, were any born,
Beneath this low roof tree?

Whose axe the wall of forest broke,
And let the wailing sunshine through?
What good-wife sent the earliest smoke
Up the great chimney tree?

Did rustic loves hither come?
Did maids, swaying back and forth
In rhythmic grace, at wheel and loom,
Make light their toll with mirth?

Did child-feet patter on the stair?
Did boyish frolic in the snow?
Did gray age in her elbow chair,
Knit rocking to and fro?

The murmuring brook, the sighing breeze,
The pines slow whisper, cannot tell;
Low mounds beneath the hemlock trees
Keep the home once more!

Come back to bayberry scented slopes,
And fragrant fern and ground mat vine;
Breathe airs blown over hill and copse
Sweet with black birch and pine.

What matter if the gains are small?
That life's essential wants supply?

Your homestead's title gives you all
That idle wealth can buy.

All that the many-colored grave,
The brick-walled slaves of Change and Mart,

Lawn, trees, fresh air, and flowers you have,
More dear for lack of art.

Your own sole masters, freedom-willed,
With none to bid you go or stay,

Till old fields your fathers tilled,
As many men as they!

With skill that spares your tolling hands,
And chemic aid that science brings,

Reclaim the waste and outworn lands,
And reign thereon as kings!

—John Greenleaf Whittier.

Miscellaneous.

DAUNTLESS KITTY.

In those good old times when England was Merry England and May fell later, and admitted of dancing in the open air, there was a great deficiency of roads; they were few in number and but of the kind, besides being infested with highwaymen. In these days we have roads in plenty, and no foot-paths; but also no footpaths, of which our ancestors had an abundance. Not only near London and other large towns, but all the land over the pedestrian is being more and more shut out from the fields, by hideous placards with "Trespassers beware!" upon them, and constrained like cattle to keep to the dusty highway. The placards will doubtless be swept away (with much else better worth keeping) at a no distant date (for it seems to those who read the signs of the times,) but in the meantime the walker suffers. Even in the lake country the nuisances are growing, and the very mountains are getting a ring fence put round them, as if in sign of the union of selfishness and shortsightedness in their proprietors.

Thus it happens that the country, for him who loves it, has begun to signify only those parts of England in which he can move with the old freedom; where one can still go by footpath from church spire to church spire, through the purple clover or the golden wheat, with no other obstruction than the stile, itself a place of rest, with room for two upon it, which is the right number for company. This was one of the reasons which (besides health and youth) made Maristone such a charming spot to me years ago when I was reading there for—well, for something I never got—with my private tutor. The whole district was full of foot-paths, and there was a short cut to everywhere, which was always longer than the long way round, because one always dawdled so over its beauties. There were roads, of course, and one turnpike one, but with that exception even these were very different from the bare, broad highways on which cyclists nowadays beat other cyclists' "records." They were lanes with wild, luxuriant hedgerows, or leafy walks that met above one's head, with sudden glimpses over lichenized gates of all the country round; and bordered in noble extravagance with tufted grass, where the travelling tinker's hobbled horse fed, or the gypsies pitched their tents, and the pretty ones told your fortune—if you looked as if you had one to speak of, and crossed their palms with silver.

In winter, it is true, they were muddy, not to say boggy, and then being no arrangement for lighting them in the evening there were incidents in night travel that foolish townfolk would perhaps have magnified into accidents; in the country, consciousness of the brain hardly makes any difference to the inhabitants; and the breaking of a collar bone is less than a shirt button coming off (especially at the back of the neck) to the Londoner.

We were not always studying at the carriage, and indeed had plenty of time for making the acquaintance of our neighbors; though eructed had not been born, nor lawn tennis thought of, there were opportunities of meeting offered to young people of which my tutor's pupils frequently availed themselves. We fell in love pretty constantly with the young ladies of the county, though not very far, not so as to hurt ourselves much; for falling in love (especially in youth) is a very different thing from falling in battle; but whomsoever we loved of these high-born damsels, there was always a corner in our hearts left for Kitty Carol, who was no "young lady" at all. It was a most innocent proceeding—as for my part I am prepared, with my hand upon my heart, to swear—and only the natural outcome of the tenderness of our years and the chivalry of our hearts; and at all events we could not help it. Slight as a fairy, and very little bigger; graceful as a fawn; beautiful as a lily (only much more modest than they are represented by the prophet), and wearing all their weight of learning (for though but 19 she was the village school mistress), like a flower she enthralls us all.

One winter's night I was woken out of my sleep at the vicarage by the sound of a great bell, and huddling on a few clothes, roused up the vicar. "There must be a conflagration, sir, somewhere," I cried excitedly, "for the fire bell is going." My tutor, who piqued himself on his logical faculties, pushed up his nightcap over his forehead, as he sat in bed, and began to demonstrate that I was laboring under a delusion because there was no fire bell in the parish.

"Well, it's not the church bell, sir."

"I hope not indeed, at such an hour as this," he answered, for he was a stickler for his ecclesiastical privileges, "it is only a singing in your ears, which a blue pill!" But here he heard the clang of the bell himself. "Good heavens," he cried, "it is from the schoolhouse," and he was out of bed in a second.

In five minutes we were all flying down the road in our great coats (and little else) to Kitty's rescue. The vicar had told her it ever she was in trouble to ring the school bell, and there was no doubt that something was amiss with her. As we passed Grimshaw's farm we saw no light in the windows, which seemed strange, for although we knew old Grim was gone away for a day or two, it was amazing that Jeff had not been roused by the bell; and as it was still ringing, he could not have preceived us. However, there was no time for speculation, for we were all running our hardest, Castleton leading, because his lordship had the longest leg.

The moon was at its full, and around the schoolhouse it was almost as light as day. On the ground in front of it, white with frost, lay a man and a ladder, the latter with most of its rungs smashed and the former with his leg broken. They must both have had a nasty fall. The man was Mr. Richard Tarlton, white and speechless.

"What the de—deu—deuce are you doing here, you bl—bl—blackguard," stammered his lordship; "I am a good master, but you have had a nasty fall. The man was Mr. Richard Tarlton, white and speechless.

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"What is it, Kitty?" cried my tutor, banging at the door with the thick cudgel with which he had provided himself; "it is the son of the prostrate figure in the road she set up a little scream:

"Oh the poor man," she said, "I am sure he has hurt himself most dreadfully. It was his screams that frightened me so."

"It was something else frightened you first, though, my poor girl," said the vicar, pitifully. "It is clear enough that this scoundrel was going to rob the house, and would have done it, but for you pushing him and his ladder backward. You're a brave girl, a dauntless girl, Kitty, and you would have no fear of him if you had been of a man with the utmost secrecy and caution. It was only because the old farmer thought so much of himself and his wealth, and that Jeff would never venture to fall in love with any woman without his permission, that the thing was kept from him; a very just punishment for his egomism and greed.

These frankies, though it always sent us into fits of laughter, was of course far from polite, and since he treated comparative strangers in that way, one may guess how his own son fare, who was entirely dependent on him. None of our mammas, indeed, would have been more horrified at the idea of our marrying portly Kitty Carol than he would have been at that of her becoming Mrs. Geoffrey Grimshaw; and poor Jeff, as we called him (for we all liked the young, handsome fellow, who took the prizes for back sword and cudgel play throughout the neighborhood) had to carry on his love a flir with the utmost secrecy and caution. It was only because the old farmer thought so much of himself and his wealth, and that Jeff would never venture to fall in love with any woman without his permission, that the thing was kept from him; a very just punishment for his egomism and greed.

But we were all in the secret of Jeff's love affair, and many a laugh we had at Kitty's expense about it, though she protested that for her part she did not know what we meant and knew no more of the young man save what she had seen of him at "the sports," and from the gallery in church.

For Kitty was organist (if a ten-pound hammonium can be called an organ) as well as schoolmistress, and had a better view of the congregation than even the vicar himself, and often had I seen her bright eyes glancing at the Grimshaw pew to be reflected by another glance (not from old Grim's eyes, which were generally closed in slumber) like the sun upon the window.

It was curious how a girl so quiet and simple, and a young fellow so frank and honest as Jeff, could manage matters so cleverly not to excite suspicion in a quarter which would have been fatal to their success; but Jeff's father knew little about her, certainly not how lovely she was, which showed how very Old Grim was getting—except that she had forty pounds a year from the parish, which he thought and said was twenty pounds too much.

Besides this little income, she had the school-house to live in rent free, which was of course an object to her, though not one girl out of ten would have dared to take advantage of it. For the schoolhouse was some little distance from the village, and stood quite by itself, and in the winter nights it must have seemed a lonesome place enough to her. There was but one living room and bed chamber above the school room, so that she could not have kept a servant even if she could have afforded it; and Kitty was anxious to save every penny against the day when Old Grim should discover their secret and turn Jeff out of doors into the sun.

There could be no question as to the circumstances of the case. Kitty's salary had been paid her that very afternoon, being quarter day, and Dick had sought to make up of her ten pounds without difficulty. Some said he had put a crimp on his face, that she might not know him; but the more recent version of the story was that the audacious reprobate had used no concealment, but trusted to her promise not to betray him, if he spared her life. But, instead of being beholden to his mercy, no sooner had the courageous little creature heard the ladder grate on her window-sill than she had thrown up the sash, and, before his ugly visage could present itself, had grasped a rung or two and thrown both thief and ladder backward. It was wonderful how such little wrists and fairy hands could have performed such afeat, but there was a broken ladder and Dick with his broken leg, and a rural policeman watching him to prove it. Next Saturday the whole affair was in the County paper; from which it was copied into the London ones and "ran the round of the press."

Not since Grace Darling's magnificent exploit had any heroine been made so much of by the public as Kitty Carol; her courage was extolled to the skies, and what I believe pleased her much more (for she was a sensible girl) not only was a testimonial presented to her by the neighborhood, on velvet, but a purse of fifty guineas.

Nowadays, when every blackguard is whitewashed by some theory or another, connected with his birth or bringing up, and nobody is bad of himself but only made so, Dick would doubtless have been less harshly judged, but opinion in Maristone in my time respecting him was that he was a scoundrel and we pitied his poor father instead of laying the blame on him for having begotten him. He loafed about the place and took

everything out of the apothecary he could lay his hands on, except the drugs, though a little prussic acid would have suited his case to a nicely, and been a satisfaction to everybody.

One winter's night I was woken out of my sleep at the vicarage by the sound of a great

poetry, in which Kitty made a not very "allowable rhyme" with "pretty," and another with "witty," which was perfect enough so far as the rhyme went, but absolutely without foundation in fact. For Kitty, admirable as she was in so many ways, was not brilliant; she could write and cipher beautifully of course, and was, as I have said, musical; but otherwise she was not an accomplished girl; with so much beauty and good sense and courage she did not need accomplishments, nor would she have suited Jeff if she had possessed them. He, too, like herelf, was all naturalness and simplicity, as truthful as the day.

It was no slur upon Kitty's truth, but rather an illustration of her magnanimity and tenderness of heart, that a stranger thing now occurred (though it by no means gave the same public satisfaction) than even the incident that had made her "amus." Notwithstanding the wrong that had been done to her, and which might have ended disastrously indeed, Kitty declined to prosecute. She not only declared she had not recognized Dick, which would have been of little consequence, since he had been found by us almost in the very act of burglary, but protested that she was not prepared to swear any such crime had been attempted. She had no recollection, she said, of having seen him on the ladder, or of pushing it back wards, though she had heard the crash of it in the road, and the cries of the wounded ruffian. She even added that it was solely for his sake and not on her own account that had caused her to hold on to the school bell, and, ring it as it had certainly never been rung before.

This latter statement was corroborated (if one could call it by such a name, when it was obviously mere straw that he was clinging to) by Dick himself, who swore (as he would swear anything) that being drunk (as usual) he had fallen over the ladder, just opposite the schoolhouse, and that in this brittle weather they had both gone to pieces. There he was back to some small extent by Jeff; for the ladder, which belonged to his father, had been used of late for cutting hedgerows, and he was "not prepared to swear" that it had not been left out that in such a position as to have obstructed the footpath.

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And so in point of fact there was. Every engine was set to work to break down poor Kitty's resolution (her "infernal obstinacy," old Grim called it,) but without success; so angry my tutor was with her (and even with Jeff for not pressing the same arguments with her, he only said: "Well, I know nothing about it,") so harshly was she treated by "the authorities" that a reaction set in her favor, and Dauntless Kitty became more popular (on account of her magnanimity) than ever. When I quitted the vicarage for the university, I left a new set of pupils behind me even more devoted to her than the old ones; for the story of her achievement had become legend, and round her always becoming little bonnet there was a halo, not indeed of a saint (though she was that to, so far as propriety could make one), but of a heroine.

Many, many years afterwards I revisited Maristone at the invitation of my old tutor. At first we had corresponded a little, but as time went on our communications had gradually ceased, and I knew no more of what had happened in the interval in the place that for two happy years had been my home than a stranger. My young companions were scattered far and wide; Castleton had become somebody else, having succeeded to his father's place; another was his son; another was with him; another was a colonial bishop; another (the brightest of all) had perished in battle; another, alas! had "gone under" far sadder circumstances, in disaster and disgrace. We had plenty to talk about of what concerned us more nearly before I quitted: "And what has become of pretty Kitty Carol?"

"Well, she has long become Kitty Grimshaw."

"So I expected, of course. Did old Grim give his consent?"

"Only by silence," said the vicar; "the silence of its grave. He died rather suddenly, and then of course the young people—for they were still young—went their own way."

"Well, they deserved it," I said; "a more patient pair I never knew."

The vicar coughed a little dryly, I thought.

"Jeff was such a fine, frank fellow," I continued, warming with my recollection of him. "Deceit seemed so impossible to him, that I always wondered how he could have kept his love for Kitty a secret from his father, and she, too, how simple—"

"Not so simple as you think, and as I used to think," interrupted the vicar.

"Ah, but you could never forgive her for refusing to prosecute that scoundrel Dick Tarlton," said I, smiling. "Did you ever learn the rights of that story, by the way?"

"I learnt the story—but there was not much rights to it," returned my companion still more grimly. "I am sorry to destroy an illusion of youth, my dear fellow, but the young woman made fools of us all in that matter."

"What! Dauntless Kitty? Oh, do let me hear all about it!"

"Well, briefly, this is what occurred. Jeff and she were not such a patient couple, for taking advantage of a month's visit that they had gone to the bid, as some fools said, in consequence of her neglecting him, which was not only a scoundrel and a scoundrel to her, it was a scoundrel to him."

"Well, I never," said I.

"That is what we all said when we came to hear of it, which, fortunately for them, old Grimshaw never did. The farmer was away

from home, you remember, on the evening

of the burglary, and Jeff had gone to market; he called at the schoolhouse on his way home, and had a late supper with his wife. As they sat at table they heard the ladder being put up at the window: Kitty was not at all frightened, yet she hardly deserved, under the circumstances, that character for dauntlessness which she long enjoyed; as for Jeff, he rather relished the notion of the surprise he would give the burglar, when he should see whom he had to deal with instead of Kitty. In fact, I should think Richard Tarlton was almost as astonished as himself falling backward through space on to the frozen ground, with the results with which we are acquainted. But Dick had recognized Jeff, which complicated matters very much. An arrangement was therefore entered into between them on the spot. If Dick said nothing, Kitty would say nothing. He would avoid penal servitude, while the young couple would keep the secret of their marriage undisclosed. You remember how we all went on about "those little witts, those dainty fingers," having pushed the ruffian to the ground. It was Jeff's fingers, which were not at all dainty, that did it.

The way in which she was spoken of in the testimonial (which I am afraid I composed) makes me with indignation even at this moment. Behind a long counter, worn smooth and greasy by many a threadbare sleepy, is a short, fat man, with a drooping mustache and small gray eyes—eyes that are like a ferret's; they never look directly at a man, but the person who stands before them knows instinctively that they have taken him in from head to foot, have shown the pawn-shop keeper how sorely money is needed, how much spirit is left in the "big row

FRENCH AGRICULTURE.

Green Manuring Discussed—Its Value as an Invigorator of the Soil.

From our Paris Correspondent.

PARIS, June 10, 1890.

Green manuring, a process common in Roman agriculture during the first century of ours, following Columella, and according to Palladius who wrote three centuries later, is becoming very general at present on the Continent. Indeed it was ever in favor as a soil ameliorator, till the discovery of guano and the employment of fertilizers. Plowing in a green crop increases the supply of humus in the soil, and adds to its stock of nitrogen; the latter being taken from the air, while the roots draw up mineral food from the deeper layers of the arable soil. The green stuff plowed down develops porosity in stiff, while binding light soils—a contradiction that will later be reconciled and explained; while at the same time it is a cheap manure supply and a most efficacious plan of cleansing land fouled with titch or other weeds.

The best plants for plowing in are the leguminous and cruciferous. The first, lupine being the chief for light soils; the second, for clays, white mustard heading the list. Green manuring is generally a catch or intercary crop, either sown at once after a cereal has been removed, or plowed down before the arrival of frost; or sown in spring over a winter, or simultaneously with a summer cereal. When land is rank with couch, plowing down a succession of green foliage will rot the roots of the weed and prove an excellent preparation for a grain crop. It is unnecessary to discuss the question whether it is more profitable to employ the catch crop as fodder or to plow it down. Experience is in favor of the latter; besides the culture of a crop for green manuring depends very much on the ordinary work of the farm permitting the operation to be undertaken.

Formerly turnips were grown, then crushed with a cloid crusher and furrowed in. In parts of Scotland the turnips when lifted in November are divested of their tops, when the latter are plowed in five inches deep and tell on the succeeding grain crop. The efficacy of residual green manuring is evident on a following crop, when a clover lea or old pasture land is broken up. It is only very recently that science has been able to establish the precise action of a green manure. What food does a leguminous crop take away from the soil? An acre of red clover represents in pounds weight a total of 255 of pure ash; 102 of nitrogen; 87 of potash; 25 of phosphoric acid; 9% of sulphur; 4 of soda; 86 of lime; 31 magnesia; 9% of chlorine, and 7 silica.

To obtain the benefits from green manure, the soil must possess an adequate supply of potash and phosphoric acid; if these ingredients are wanting they must be supplied at the rate of four cwt. of pulverized scarce or superphosphates, and two cwt. of kainite. These mineral fertilizers will benefit succeeding crops.

Science has demonstrated by the conclusive experiments of Messrs. Hellriegel and Wilmarth, that leguminous plants absorb and fix free nitrogen from the atmosphere through the influence of bacteria or animalcules, in the tiny warts or nodes on the rootlets, as leguminous plants develop in a soil deficient in nitrogen. Now cereals and grasses cannot exist unless the soil contains nitrates or ammonical salts. Leguminous plants further have rootlets that penetrate deeply in search of mineral food. These roots add by their decay to the stock of humus, where the foliage and stems are the chief contributors. Wheat, barley and oats—straw and grain, straw per acre—from the soil, from 45 to 52 lbs. of nitrogen; 27 to 38 of potash, and 20 to 23 of phosphoric acid.

Professor Munz of the Agricultural Institute of Paris has just made still further scientifically evident the importance of green manuring, both for light and for clay soils; the former containing two per cent of lime, and the latter none at all. On both soils he employed as fertilizers green lupine, dried blood and sulphate of ammonia. The results showed that in the case of the light soil, permeable to the air, the green manure nitrified more rapidly than the dried blood; while in the stiff clay, not very porous to the air, the lupine manure nitrified more rapidly than the dried blood, and even more so than the pure sulphate of ammonia. The free admission of air to the soil is then an indispensable condition for the nitrification work of the animalcules. Now green manuring by its volume is exceedingly greater than that of the blood or the sulphate, modifies the physical constitution of clay soils by destroying their compactness, and allowing the egress of air; while in the case of sandy soils, that same end is attained, plus humidity and an increased supply of humus.

Professor Munz conducted experiments where maize replaced lupine, and where nitrate of soda was separately employed as a manure, while a parcel of soil remained unmanured. Here the result placed the green manure on a par with that of the nitrate of soda—the most efficacious; superior to blood and sulphate, and double in efficacy to the unmanured soil.

Plowing in an acre of green lupine is considered equal to an application of 20 tons of farm manure. Green manuring has the advantage to cost nothing more than plowing, rolling, scattering the seed, and giving a time of a light harrow. In dry climates green manure is a precious auxiliary to the cultivator, as it secures humidity. As already described, an acre of lupine can add gratuitously 100 lbs. of atmospheric nitrogen to the soil; this means a free gift, at the market value of nitrates, of some 50 fr. It was from the south of France that M. de Wulfen, about seventy years ago, introduced into Germany the process of green manuring, and that his countryman, M. Schulz has lately so much popularized, for light and poor soils where clover fails and turnips sicken. Two kinds of lupine are cultivated—yellow and blue; the former has larger leaves and is more succulent than the blue, and will thrive on almost blowing sand. Sheep and cattle eat it, but pigs do not. Lupine is also raised for its seeds, which in nutritive value are akin to peas and lentils. In the green state it contains 89 per cent of water—the same as drumhead cabbage, while turnips contain from 88 to 91 per cent. In the south of France, white lupine serves to pasture sheep. In

the region of Paris, lupine is sown in April, at the rate of six gallons per acre.

Boseler has shown that plants, lupine especially, are richer in nitrogen when fully flowered than when coming into flower. Lupine for green manure is sown broadcast among winter rye before coming into flower. In Germany and Belgium, it is sown in potato fields after the plants have been earthed up. White mustard, spurry, buckwheat, trifolium, tares and Italian rye grass are employed as green manures. White mustard is sown immediately after the removal of the grain crop, and plowed down at close of winter. A mixture of winter tares and rye is grown for a similar end, though like buckwheat and rape the volume of foliage is less. Rape stands cold well, shelters the soil, but requires manuring. White mustard is excellent for poor, stiff and dirty clays, and becomes truly a fallow crop if sown at the close of March, at the rate of three bushels per acre. It will be in full flower about the last week in May; then plow it slightly in—four inches deep; give a few tines with the Norwegian harrow and resow with white mustard if it did not discharge any, and a short time ago I noticed that she had a difficulty in breathing, and she discharge from the left nostril, a matter like the white of an egg. The bunch kept hard and enlarges. On the first of August, and she gives 40 lbs. of milk per day, and is in good flesh; her hair is sleek, and she eats heartily.

The second is a two year old heifer. In February I discovered a small bunch on the right side of her under jaw, and that appeared to be free from the bone. It grew rapidly, and about a month ago I discovered a soft spot on the under side of the bunch. I put my knife in to it, and there was a thick matter run out. In a week I found another soft spot and I opened it again, and it run the same. Now the bunch is quite large and has a hard, solid center. I have no idea where I opened it. I haven't done anything for her only I wash the bunch with warm water and soft soap, and I put Kendall's Spaini Cure on a few times. She was thin all winter and came in in May, and it left her quite thin and weak, but she appears to gain in flesh, and seems well and eat. She gives 30 lbs. of milk a day. And now the question is, is that milk good to use? Can there be anything done for the cows, or is it a contagious disease or not?

Do You Know

That you can take the North Shore Limited of the Michigan Central, "The Niagara Falls Route," at 7:45 P. M., from Detroit, after the day's business; eat, sleep, smoke, read, write, chat, and lounge luxuriously on board, and reach any New York State point the next day, even points on Long Island Sound and the Jersey Coast, or Saratoga, Rutland, Burlington, Springfield, Boston, and other New England points. If you doubt it, try it.

Veterinary Department

Tumors on Cattle.

NORTHLAKE, JUNE 29, 1890.

Veterinary Editor of the Michigan Farmer. I have two cows, the first being three years old, and something over a year ago I noticed a bunch on the upper jaw under the left eye; it appeared to be fast to the bone and hard; it grew slow, and last winter I blistered it until it became a raw sore. It did not discharge any, and a short time ago I noticed that she had a difficulty in breathing, and she discharge from the left nostril, a matter like the white of an egg. The bunch kept hard and enlarges. On the first of August, and she gives 40 lbs. of milk per day, and is in good flesh; her hair is sleek, and she eats heartily.

The second is a two year old heifer. In February I discovered a small bunch on the right side of her under jaw, and that appeared to be free from the bone. It grew rapidly, and about a month ago I discovered a soft spot on the under side of the bunch. I put my knife in to it, and there was a thick matter run out. In a week I found another soft spot and I opened it again, and it run the same. Now the bunch is quite large and has a hard, solid center. I have no idea where I opened it. I haven't done anything for her only I wash the bunch with warm water and soft soap, and I put Kendall's Spaini Cure on a few times. She was thin all winter and came in in May, and it left her quite thin and weak, but she appears to gain in flesh, and seems well and eat. She gives 30 lbs. of milk a day. And now the question is, is that milk good to use? Can there be anything done for the cows, or is it a contagious disease or not?

A. A. C.

Answer.—The tumor under the eye of your cow as described indicates a bony cancellated structure, extending into the nostril. The application of a blister in such cases is to add "fuel to the fire." The effect of such applications is to stimulate its more rapid growth. This case, as described, is too far advanced to admit of cure. If the general health of the animal is not involved, it would be better to turn her over to the butcher, otherwise she should be killed and buried.

In case second the enlargement on the under jaw of your heifer as described, is probably an encysted tumor, or sac containing pus or cheesy matter, which may be easily removed with a scalpel. Or the application of a red hot pointed iron, properly made and passed through the body of these excrements, will kill their growth. The disease is not contagious, and may be cured if taken before serious alteration in the tony structure has taken place.

A. C. C.

Probably Caries of the Teeth in a Mare.

GRAND BLANC, JUNE 27, 1890.

Veterinary Editor of the Michigan Farmer.

I have a mare nine years old, that there is something wrong with. She cannot eat good; she will chew her hay up in wads, then spit it out. She holds her head on one side while chewing and grunts when she moves her head. The veterinarian here says one side of her head is getting paralyzed. If it is, is there anything I can do that will cure her? Please answer and oblige.

A. SUBSCRIBER.

Answer.—The trouble with your horse is probably due to caries of the teeth, not uncommon in horses over nine or ten years. It also occurs in younger animals, occasionally. Have your veterinary surgeon make a careful examination of the molar teeth, more particularly of the upper jaw, as the teeth in the under jaw are rarely affected by caries. See the "Horse and His Diseases," page 227.

Polypus in the Cow's Teat.

NORTHLAKE, JUNE 26, 1890.

Veterinary Editor of the Michigan Farmer.

I send you a clipping taken from the MICHIGAN FARMER of Jan. 9th, 1888, which describes my case exactly, but the cure don't work. I use a milking tube, and no manage to draw the milk, but I can't push the milk stone up in the udder; it moves up and down some. I put it in the tube, but it won't go in. The veterinarian here says one side of her head is getting paralyzed. If it is, is there anything I can do that will cure her?

Please answer and oblige.

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Answer.—The trouble with your horse is probably due to caries of the teeth, not uncommon in horses over nine or ten years. It also occurs in younger animals, occasionally. Have your veterinary surgeon make a careful examination of the molar teeth, more particularly of the upper jaw, as the teeth in the under jaw are rarely affected by caries. See the "Horse and His Diseases," page 227.

LIVE STOCK MARKETS.

Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, July 4, 1890.

FLOUR.—No change to note in prices. Quotations on car lots are as follows:

Michigan roller process..... 4.00 24¢ Michigan patents..... 4.40 22¢ Minnesota, bakers..... 3.92 24¢ Ohio, 24¢ 25¢

By car..... 4.00 24¢

Low grades..... 2.50 22¢

WHEAT.—Higher on both spot and futures than a week ago. Chicago, St. Louis and New York are also higher, and showed an advance yesterday while our local market dropped off a little. Quotations yesterday close as follows: No. 1 white, 88c; No. 2 white, 81¢c; No. 3 white, 6c; No. 2 red, 88c; No. 3 red, 81¢c. Closing prices on futures were as follows: No. 2 red, July, 89c; August, 89c; September, 89c; No. 3 red, 80c; No. 3, 83c; No. 4, 83c; No. 2 yellow, 78c; No. 3, 80c.

CORN.—Quotations are as follows: No. 2, 80c; No. 3, 84c; No. 4, 83c; No. 5 yellow, 78c; No. 6, 80c.

OATS.—No. 2 white quoted at 88c; No. 2 mixed at 81c; No. 1 light mixed at 83¢c per bu. Demand active.

BARLEY.—Market dull. Selling at a range of 80¢ to \$1 per cental for fair to choice samples. There were neither receipts nor shipments the past week.

RYE.—Quoted at 48¢c per bu. for No. 2.

FED.—Winter bran quoted at \$1.01 25 per ton; middlings, \$1.02 12 per ton.

BUTTER.—Market quiet. Fresh dairy, 18¢c per lb. to 20¢c; old packed stock, unsalted; creamy quiet; quoted at 18¢c to 19¢c per lb.

CHEESE.—Market quiet. Full creamed cheese at 82¢c per lb.

Eggs.—Market easy at 12¢c to 13¢c per dozen. Receipts of fresh are ample.

HONEY.—Quoted at 10¢c to 12¢c per comb. Extract, 67¢c. Market dull.

HAM.—Fair in car lots, 99¢ to 111¢ per lb.

BAKED.—Quoted at \$2.25 to \$2.50 per lb. for city ham.

SAUSAGES.—Quoted at \$1.25 to \$1.50 per lb. for city.

SAUERKRAUT.—Michigan, 80c per lb. in lots, or 85c in 100 lb. lots; 101¢ to 104¢ per lb. Market dull.

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